UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/510,565	02/22/2000	Steven P. Levi	777.086US3	2988

22801　　7590　　02/20/2004	EXAMINER
LEE & HAYES PLLC	VU, THONG H

LEE & HAYES PLLC
421 W RIVERSIDE AVENUE SUITE 500
SPOKANE, WA 99201

ART UNIT	PAPER NUMBER
2142	

DATE MAILED: 02/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application N .		Applicant(s)
Office Action Summary	09/510,565		LEVI ET AL.
	Examiner		Art Unit
	Thong H Vu		2142

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _05 December 2003_.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _17-19,37-39 and 42-89_ is/are pending in the application.

     4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) _____ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

     a)☐ All   b)☐ Some * c)☐ None of:

       1.☐ Certified copies of the priority documents have been received.

       2.☐ Certified copies of the priority documents have been received in Application No. _____.

       3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

     * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
     Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
     Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

1.   Claims 17-19,37-39 and 42–89 are pending.

Response to Arguments

2.   Applicant's arguments with respect to claims 17,37,42,43,53,60 and 61 have

been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of
> matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the
> conditions and requirements of this title.

3.   Claims 37-39,42,53-66,70-75,79-87 and 89 are rejected under 35 U.S.C. 101

because the claimed invention is directed to non-statutory subject matter.

These claims are drawn to non-functional descriptive material. see MPEP 2106

1. Nonstatutory Subject Matter

Claims to computer-related inventions that are clearly nonstatutory fall into the same

general categories as nonstatutory claims in other arts, namely natural phenomena such as

magnetism, and abstract ideas or laws of nature which constitute "descriptive material."

Abstract ideas, Warmerdam, 33 F.3d at 1360, 31 USPQ2d at 1759, or the mere

manipulation of abstract ideas, Schrader, 22 F.3d at 292-93, 30 USPQ2d at 1457-58,

are not patentable. Descriptive material can be characterized as either "functional

descriptive material" or "nonfunctional descriptive material." In this context, "functional

descriptive material" consists of data structures and computer programs which impart

functionality when employed as a computer component. (The definition of "data

structure" is "a physical or logical relationship among data elements, designed to support

specific data manipulation functions." The New IEEE Standard Dictionary of Electrical and

Electronics Terms 308 (5th ed. 1993).) "Nonfunctional descriptive material" includes but is

not limited to music, literary works and a compilation or mere arrangement of data.

Both types of "descriptive material" are nonstatutory when claimed as descriptive

material per se. Warmerdam, 33 F.3d at 1360, 31 USPQ2d at 1759. When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized. Compare In re Lowry, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994) (claim to data structure stored on a computer readable medium that increases computer efficiency held statutory) and Warmerdam, 33 F.3d at 1360-61, 31 USPQ2d at 1759 (claim to computer having a specific data structure stored in memory held statutory product-by-process claim) with Warmerdam, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure per se held nonstatutory). When nonfunctional descriptive material is recorded on some computer-readable medium, it is not statutory since no requisite functionality is present to satisfy the practical application requirement. Merely claiming nonfunctional descriptive material stored in a computer-readable medium does not make it statutory. Such a result would exalt form over substance. In re Sarkar, 588 F.2d 1330, 1333, 200 USPQ 132, 137 (CCPA 1978) ("[E]ach invention must be evaluated as claimed; yet semantogenic considerations preclude a determination based solely on words appearing in the claims. In the final analysis under 101, the claimed invention, as a whole, must be evaluated for what it is.") (quoted with approval in Abele, 684 F.2d at 907, 214 USPQ at 687). See also In re Johnson, 589 F.2d 1070, 1077, 200 USPQ 199, 206 (CCPA 1978) ("form of the claim is often an exercise in drafting").

Thus, nonstatutory music is not a computer component and it does not become statutory by merely recording it on a compact disk. Protection for this type of work is provided under the copyright law.

Claim Rejections - 35 USC § 112

4.   Claims 37,53 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention (i.e.: a field in the logical structure for holding a value

that specifies a maximum bit rate at which the multiple streams of data *may be*

rendered).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5.   Claims 17-19,37,43-59,67-81,88 and 89 are rejected under 35 U.S.C. § 103 as

being unpatentable over Danneels [5,602,992] in view of Nadan [5,321,750].

6.   As per claims 17 and 43, Danneels discloses in a computer system having a

source computer and a destination computer having a clock that regulates timing of

activities at the destination computer, a method comprising steps of:

providing a logical structure (Danneels, logical network transport 316, Fig 3) for

encapsulating multiple streams of data, said streams of data being stored in packets

(Danneels ,multiple independent streams, col 5 lines 9-40); and

storing clock licenses that dictate advancement of a clock in multiple ones of the

packets (Danneels, the rendering packet P is scheduled for a future time corresponding

to a number of client system clock ticks in advance of the current time, col 8 line 45-col

9 line 20);

transmitting the logical structure from the source computer (Danneels client

320,322 Fig 3) to the destination computer (Danneels server 310,312 Fig 3); and

for each packet that holds a clock licenses, advancing the clock at the

destination computer as dictated by the clock license in response to receiving the

packet at the destination computer (Danneels col 8 line 45-col 9 line 20).

However Danneels does not explicitly detail <u>the logical structure holds a field for</u>

<u>maximum packet size and a field for a minimum packet size</u>;

A skilled artisan would have motivation to improve the multiple streams

communication system and found in the well-known art wherein Nadan teaching an

information distribution system with a plurality of decoder to decodes a plurality of data

streams [Nadan, col 4 line 39-col 5 line 6] including a subfield for the maximum value

signal and a subfield for the minimum value signal [Nadan, col 29 lines 15-27]. The

maximum size field and minimum size field included in a message or token is a well-

known art [see Walster, Fig 24; Guttag, col 71 lines 29-41]

Therefore, it would have been obvious to one having ordinary skill in the art at

the time the invention was made to incorporate the maximum size field and minimum

size field on a multiple streams system as taught by Nadan into the Danneels apparatus

in order to utilize the comparing packet time information with clock. Doing so would

provide dynamic, simple and reliability to operate the multiple data streams over a large

network.

7.   As per claim 18, Danneels-Nadan disclose wherein each clock license includes a

time value to which the clock at the destination computer is to be advanced (Danneels

col 8 line 45-col 9 line 20).

8.   As per claim 19, Danneels-Nadan disclose wherein each clock license includes

an expiration time after which the clock license is invalid as inherent feature of clock

signal [Nadan, time out period expired, col 40 lines 29-43].

9.   As per claims 37,53 Danneels-Nadan disclose a computer-readable storage

medium holding a logical structure (Danneels logical network transport 316, Fig 3) that

encapsulates components comprising:

        multiple streams of data wherein the streams of data are stored in packets

(Danneels multiple independent streams, col 5 lines 9-40) ;

        clock licenses that each dictate advancement of a clock that regulates rendering

of the data in the packets (Danneels col 8 lines 45-col 9 line 20);

        a field in the logical structure for holding a value that specifies a maximum bit

rate at which the multiple streams of data may be rendered [Nadan, col 29 lines 15-27]

10.   As per claim 44, Danneels-Nadan disclose the replicas of information hold

property information regarding the samples of data [Nadan, duplicated message, col 17

line 40-col 18 line 10].

11.   As per claim 45, Danneels-Nadan disclose portions of a sample are stored in

selected packets and a replica of property information regarding the sample is stored in

each packet in which a portion of the sample is stored as inherent feature of duplicated

message.

12.   As per claim 46, Danneels-Nadan disclose examining one of the replicas of

information at the destination computer when one of the to packets is lost during the

transmitting as inherent feature of duplicated packets.

13.   As per claim 47, Danneels-Nadan disclose using the error correcting data in the

at least some of the packets to correct an error when the transmitted logical structure is

received at the destination [Nadan, error detection and correction, col 26 line 54-col 27

lines 2]

14.   As per claim 48, Danneels-Nadan-Goetz disclose the logical structure includes a

header section and a data section; and the error correcting data is stored in multiple

packets in the data section as inherent feature of error correction process [Nadan,

header portion and data portion, col 27 lines 52-62].

15.   As per claim 49, Danneels-Nadan disclose information in the header section of

the logical structure indicates what error correcting methodology is used with the error

correcting data stored in the multiple packets in the data section [Nadan, header portion

and data portion, col 27 lines 52-66].

16.   As per claim 50, Danneels-Nadan-Goetz disclose the header section holds

information regarding multiple error correcting methods as inherent feature of error

correction process.

17.   As per claim 51, Danneels-Nadan disclose the error correcting data identifies one

of a plurality of error correcting methods as inherent feature of error correction process.

18.   As per claim 52, Danneels-Nadan disclose the error correcting data holds parity

bits [Nadan, parity bit, col 27 lines 52-62].

19.   Claims 38-39,54-59 contain the similar limitations set forth of method claims 18-

19,44-52. Therefore, claims 38-39,54-59 are rejected for the similar rationale set forth in

claims 18-19,44-52.

20.   Claims 42,67-75 are rejected under 35 U.S.C. § 103 as being unpatentable over

Danneels [5,602,992] in view of Nadan [5,321,750] and further in view of Hsu et al [Hsu

5,581,691]

21.   As per claim 42, Danneels-Nadan disclose a data processing system comprising

a source computer with a storage (Danneels logical network transport 316, Fig 3);

a logical structure stored in storage for encapsulating multiple data streams, data

is from said data streams being incorporated in packets (Danneels,multiple independent

streams, col 5 lines 9-40); a clock license being encapsulated into at least one packet

for advancing a clock at a destination when processed at the destination (Danneels col

8 line 45-col 9 line 20).

However Danneels-Nadan do not teach the data stored in the packets are of a

new media type; the logical structure stores an identifier for the new media type and

the identifier can be used to determine a renderer to use to render data of new media

type.

A skilled artisan would like to implement the logical network transport on

Danneels-Nadan apparatus and found Hsu teaching. Hsu discloses a workflow

management system transmitting data in packets of stream or flow wherein each

instance of a flow is identifier by a unique Flow instance ID and Flow type ID [Hsu, col

11 lines 53-61]. It was clearly that the render device [Danneels, col 4 lines 8-43] can use

the Flow type ID to determine a render data.

Therefore, it would have been obvious to one having ordinary skill in the art at

the time the invention was made to incorporate the Flow ID and Flow type ID as taught

by Hsu into the Danneels-Nadan apparatus in order to utilize the logical transport of the

multiple streams communication system. Doing so would provide the efficiency and

reliability to monitor the data type of multiple streams over network.

22.   As per claims 70,73 Danneels-Nadan disclose the logical structure that

encapsulates a maximum packet size and a minimum packet size [Nadan, col 29 lines

15-27]

23.   As per claims 67,71,74 Danneels-Nadan disclose the multiple stream of data in

logical structure are Active stream Format data streams as a design choice.

24.   As per claims 68,69,72,75 Danneels-Nadan disclose the streams of data stored

in packets are of a new media data type; and the new media type can be used to

determine a renderer to use to render data of new media type [Hsu, col 11 lines 53-61].

25.   Claims 60-66, 82-87 are rejected under 35 U.S.C. § 103 as being unpatentable

over Danneels [5,602,992] in view of Nadan [5,321,750] and further in view of

Azadegan et al [Azadegan 5,612,900]

26.   As per claim 60, Danneels-Nadan disclose the streams of data stored in the

packets are samples of data from multiple data streams in the packets for transmission

on a packet-by-packet basis over a packet switched network (Danneels, multiple

independent streams, col 5 lines 9-40);

       error correcting data is stored in the at least some of the packets (Nadan, error

per video frame, col 45 lines 47-59;frame contained an error, col 47 linens 5-21).

        the error correcting data identifies an error correcting method for the at least

some of the packets (Nadan, col 26 line 54-col 27 line 62);

        Danneels-Nadan also disclosed replicas of information are stored in at least

some of the packets (Nadan, the duplicated message col 17 lines 40-col 18 line 10).

However Danneels-Nadan do not detail a flag is stored in each said packet that holds

the replicas. It was a well-known in the multimedia art or video/audio digital data

streams that a flag or field of packet or stream was used to indicated the information as copied data or holds the replicas (Azadegan, col 58 lines 5-16)

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the flag or field of replicas for each packet as taught by Azadegan into the Danneels-Nadan apparatus in order to utilize the logical transport of the multiple streams communication system. Doing so would provide the efficiency and reliability to monitor the data type of multiple streams over network.

27.   As per claim 62 Danneels-Nadan-Azadegan disclose the logical structure includes a header section and a data section; and the error correcting data is stored in multiple packets in the data section as inherent feature of error correction process [Nadan, header portion and data portion, col 27 lines 52-62].

28.   As per claim 63 Danneels-Nadan-Azadegan disclose information in the header section of the logical structure indicates what error correcting methodology is used with the error correcting data stored in the multiple packets in the data section [Nadan, header portion and data portion, col 27 lines 52-66].

29.   As per claim 64 Danneels-Nadan-Azadegan disclose the header section holds information regarding multiple error correcting methods as inherent feature of error correction process.

30.   As per claim 65 Danneels-Nadan-Azadegan disclose the error correcting data

identifies one of a plurality of error correcting methods as inherent feature of error

correction process.

31.   As per claim 66 Danneels-Nadan-Azadegan disclose the error correcting data

holds parity bits [Nadan, parity bit, col 27 lines 52-62].

32.   Claims 82-84 contain the similar limitations set forth of method claims 70-72.

Therefore, claims 82-84 are rejected for the similar rationale set forth in claims 70-72.

33.   Claims 61, 85-87 contain the similar limitations set forth of method claims 60,82-

84. Therefore, claims 61, 82-84 are rejected for the similar rationale set forth in claims

60, 82-84.

34.   Any inquiry concerning this communication or earlier communications from the
examiner should be directed to examiner Thong Vu, whose telephone number is (703)-
305-4643.
The examiner can normally be reached on Monday-Thursday from 8:00AM- 4:30PM.
        If attempts to reach the examiner by telephone are unsuccessful, the examiner's
supervisor, *Jack Harvey*, can be reached at (703) 305-9705.
        Any inquiry of a general nature or relating to the status of this application should
be directed to the Group receptionist whose telephone number is (703) 305-9700.
        Any response to this action should be mailed to: Commissioner of Patent and
Trademarks, Washington, D.C. 20231 or faxed to :
                        After Final   (703) 746-7238
                        Official: (703) 746-7239
                        Non-Official (703) 746-7240
        Hand-delivered responses should be brought to Crystal Park 11,2121 Crystal
Drive, Arlington. VA., Sixth Floor (Receptionist).

Thong Vu
Patent Examiner
Art Unit 2142